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ABSTRACT

Although youth employment programs operate on the premise that training will produce economic returns in the form of higher employment probabilities, better jobs, and higher wages, the efficacy of these programs has sometimes been in doubt. To determine if and how these programs produce youths who can find and keep a job, 3-year follow-up data were compared for a national sample of 419 employment training program participants and 356 non-participants of comparable background. Analysis of results showed significantly more months of employment and significantly higher wages for the participants than for the non-participants. These differences were sustained after controlling for the effects of age, sex, race/ethnicity, economic status, local unemployment rate, and preprogram levels of education and reading ability. These effects were greatest in programs which emphasized work experience or on-the-job training. Participant-control differences in months of employment were greater for minority than non-minority youth, and greater for females than for males. Despite these significant results, background, previous education, and local unemployment rates were shown to have a greater effect on economic outcomes than did program participation. (Author/MCF)

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The Effects of Youth Employment Program Participation
on Later Employment and Education/Training

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Abstract

A three-year follow-up youth of a national sample of 419 employment training program participants and 356 non-participants of comparable background showed significantly more months of employment and significantly higher wages for the participants than the non-participants. These differences were sustained after controlling for the effects of age, sex, race/ethnicity, economic status, local unemployment rate, and preprogram levels of education and reading ability. These effects were greatest in programs which emphasized work experience or on-the-job training. Participant-control differences in months of employment were greater for minority than non-minority youth, and greater for females than for males. Despite these significant results, background, previous education, and local unemployment rates were shown to have a greater effect on economic outcomes than did program participation.

It is becoming increasingly evident that many youths leave the public schools with little or no preparation that will enable them to compete effectively in the labor force. One evidence of this is the high unemployment rate for young adults. In November 1982 the unemployment rate for youths age 16 to 19 was 24.2%. For Black youth this rate was even higher--50.1 percent.

The causes of youth unemployment have been sought in several areas. Many stress the education-employment linkage. Higher unemployment rates, lower level jobs with lower hourly wages, and declining labor force participation have been shown to be the consequences of inadequate education (Sum, Harrington, and Simpson, 1983). Individuals with more education at entry into youth employment training programs have been shown to benefit more in terms of obtaining employment, duration of employment, and level of earnings after program completion (Mallar et al., 1982; Sadd, 1983; Rock et al., 1982). Functional illiteracy or lack of basic skills has been implicated as the basis for lower annual wages (Meyer, 1982; Sadd, 1983) and associated with lower likelihood of obtaining additional education or training (Rock & Freeberg, 1981). Other studies have indicated that intellectual ability is related to attitudes toward and knowledge of the world of work (Mott & Moore, 1980; Parnes & Kohen, 1975).

Particular attention has been given to the role of job search behaviors in the transition from student-to-worker (Becker, 1979). The value of job search skills for minority youth has been pointed out by Johnson (1982). Enhanced job search capability has been claimed by several employment training programs (Brandis University, 1982; Holden, 1980; Leone, 1980).

In addition to the education-related factors, the changing structure of the work force, especially the increasing number of adult women, older workers, and technologically displaced blue collar workers, creates more competition for jobs (U. S. Department of Labor, 1982).

The Federal government has attempted to deal with the growing youth employment problem through the implementation of job training programs such as CETA and JTPA. These programs have sought to increase the economic self-sufficiency and employability of the participants by making an investment in their education and training (Perry et al., 1975; Block, 1979). The rationale behind these programs is that the employment and training system operates on the basic human capital premise that training will produce economic returns in the form of higher employment probabilities, better jobs, and higher wages (Harlan & Hackett, 1984).

However, the efficacy of youth employment programs has sometimes been in doubt. Evidence is limited and when available is questioned because of the small size of the groups which have been studied or because of the use of a relatively short follow-up period. Short-term analyses of different program models has suggested that on-the-job training produces higher job placement rates and higher post-program earnings than other program types (Perry et al., 1975; Westat, 1981). Race/ethnicity and sex differences in program effectiveness have also been shown. Harlan and Hackett (1984), in reviewing the literature, state "all of the studies which evaluate both males and females agree that women participants gain more compared to other women than male participants gain compared to male nonparticipants." These authors also report that Black males gain only from on-the-job training but not from classroom learning.

The main purpose of this study was to analyze existing longitudinal data from a nation-wide sample of youths who had participated in youth employment and career guidance programs and, through this analysis, to determine if and how these programs produce youths that can find and keep a job. The analysis was directed toward providing educators and policymakers with a knowledge base that would assist them in planning and designing educational programs that would give effective employment preparation to American youth.

Method

In 1979 the U. S. Department of Labor funded the implementation of 10 youth employment program models at 370 sites. Background and pre-test data was collected from the youths who entered the programs and from a control group of non-participant youths at each site. This total sample involved approximately 39,000 youths. After the participants completed the programs, both participants and controls were retested. Follow-ups were done with samples of participants and controls three months, eight months, and three years after program completion.

The three year follow-up used in this analysis represents the initial phase of a larger sampling effort that was to have continued until a 10 percent sample had been obtained. In August 1982, the first phase of the three-year follow-up obtained information from 419 participants who had completed training programs in the summer of 1979 and from 356 of their control group counterparts. At this point Department of Labor

support for the collection of additional follow-up data ended. This curtailment of funds limited the extent to which all program models are represented in the three year follow-up data. However, the programs represented include many of the largest, both in terms of trainee sample size and number of sites. Additionally, the three year follow-up obtained responses from 89 percent of the individuals selected. Thus, it can be assumed that the three year follow-up sample of respondents is reasonably representative, both of the participants who initially entered these youth employment programs and of the control subjects.

Subjects. The background characteristics of the 419 participants and 356 control subjects are shown in Table 1. The intent of the original study design was that the participants and controls be as alike as possible in age, sex, race/ethnicity, educational level, and economic status. As can be seen, this initial similarity was maintained in this three year follow-up group. The participants are slightly older than the controls and tend to come from families with a lower income level than the controls; the sex, race/ethnicity, and educational level differences are not significant.

Programs. The program models differed along several different dimensions, including duration, emphasis, services provided, and the utilization of linkages with schools, industry, labor, government and community groups. The program models in which the three year follow-up participants were enrolled differed primarily in duration and in program emphasis. Table 2 shows the distribution of participants by program

characteristics. As can be seen, the largest group of participants were enrolled in long duration career development programs, which emphasized vocational exploration, job information, and other pre-employment skills. The next largest group was in short duration programs that emphasized work experience or on-the-job training. Very few of the programs provided any formal educational component, such as the teaching of basic skills.

Prc- and Post-Tests. Because this project was interested in how the educational component of the programs changed knowledge and attitudes, pre-program tests of reading ability and pre- and post-program tests measuring knowledge of jobs, job search skills, job holding skills, self-concept, locus of control, and attitudes about work were administered. The mean reading ability level of the participants was slightly, but not significantly, higher than the controls. (Mean for the participants was 15.05, SD = 4.26, controls 14.83, SD = 4.24.) The pre-post test score gains were analyzed controlling for initial test scores. Only two tests, Vocational Attitudes and Self-Esteem, showed significant participant gains when compared with control gains. (Participant gains showed an effect size of .20 on the vocational attitudes test and of .03 on the self esteem test; the effect size of the score change for controls was .01 on the vocational attitudes test, and -.08 on the self esteem test.) Except for the initial reading test and the measures of self-esteem and locus of control, the test results showed no significant relationships with the follow-up outcomes.

Analysis. There are three analytic methods used in this study. The first, a descriptive analysis, presents a detailed population description that compares and contrasts the program participants and controls on all

major variables. The second involves an ordered sequence of regression analyses that attempts to pinpoint the relative effects of individual explanatory variables on the various outcomes. The final method involves commonality analysis as a means of summing the regression analysis results by partitioning the variation in the outcome variables into separate blocks that can be separately assigned to logical groupings of the explanatory variables.

Results

The results of the three year follow-up focus on outcomes in job search behavior, employment, education, and attitudes.

Job Search Behavior. Job search behavior of the participants and controls during the three year follow-up period was determined (See Table 3). Both groups were most likely to use friends and relatives as a job-finding source. Applying directly to an employer was the second most popular job search behavior; participants used this method significantly more than did controls.

Employment. Most of the youths worked at some time during the three year follow-up period (See Table 4). Controls were more likely to report never working than were participants.

The follow-up survey also determined if youths sought but were unable to find work at any time during the three year follow-up period. As shown in Table 5, lack of available jobs was the main reason reported by youths who were unable to find employment. This self-reported data is supported by national data on local youth unemployment rates in the 163 cities and towns in 38 states where the respondents were located.

The 1982 mean youth unemployment rate in these areas was 40.9 percent. The mean local youth unemployment rate encountered by White subjects was 22.8 percent, by Hispanic subjects 33.2 percent and by Black subjects 47.7 percent. This difference in local unemployment rates for youths from different racial/ethnic groups is highly significant (well beyond the .001 level). Lack of experience was the second most frequent reason given by the youths who were unable to find employment. Lack of education or job skills was also frequently mentioned.

The mean number of months worked by participants was 19.74, by controls 15.99 (See Table 6. These months are expressed as full-time work equivalents.) As can be seen, Blacks showed greater participant-control differences than other racial/ethnic groups and females showed a greater participant-control difference than males, suggesting greater program effectiveness for Blacks and for women.

The 1982 mean hourly wage was \$4.49 for currently employed participants and \$4.33 for the controls. This difference is significant at the .05 level.

Job complexity was coded using the factor-based substantive complexity code for 1970 US Census occupational categories. (Miller et al, 1980). The scale ranges from 0.0 to 10.0. (Representative anchor points are 0.0 = bootblack, 1.0 = child care worker, 2.0 = machine operator, 3.5 = practical nurse, 5.0 = tool & die worker, 10.0 = lawyer). Currently employed youth employment program participants held jobs of a slightly but not significantly higher complexity level than currently employed controls (Means of 2.6 vs. 2.4).

Cross tabulations were done between job search behavior and selected employment outcomes. These showed that individuals who found jobs by

going directly to an employer were more likely to be currently employed, while those who expected to obtain jobs through schools or training programs were most likely to have never found work. Individuals who found their current jobs by applying directly to employers had the highest mean hourly wage, while over 80 percent of those who found their current job through the youth employment programs had wages below \$3.50 an hour. Cross tabulations were also done between program characteristics and economic outcomes. These showed that mean hourly wages were higher for individuals who had participated in programs emphasizing work experience than for those in programs emphasizing career development.

Education and training. Education and training outcomes are important for the youth in this study because of their role in increasing human capital and providing opportunities for future employment.

Most of the participants and controls obtained further education in the 1979-1982 period. The mean number of years of education for the participants at the time of the follow-up in 1982 was 12.08, for the controls 11.97. Although this difference is not statistically significant, it may be of practical importance since 75 percent of the participants but only 68 percent of the controls completed high school.

Some individuals, of course, sought job training in addition to or instead of education. The subjects' education and training history for the follow-up period are shown in Table 7. As can be seen, there is little difference in the education/training history of the participants and controls.

The mean number of months of education and/or training is shown in Table 8. There are significant participant-control differences

in the amount of months of education/training. Participants averaged 19.98 months of education/training, controls 18.79 months. These differences show marked racial/ethnic and sex differences. Hispanics and Whites show positive and significant participant-control differences. The difference for Blacks, while not significant, favors the controls. Females show less participant-control difference than males. This suggests that the youth employment programs were less effective in bringing about positive education/training outcomes for Blacks and females than they were in bringing about positive employment outcomes.

Cross tabulations revealed that participants from programs emphasizing career development obtained significantly more months of education/training than did participants from work experience programs.

Attitudes. All of the subjects who had ever been employed were asked a series of questions about their satisfaction with their current or most recent job. Satisfaction with the job as a whole was significantly higher for youth employment program participants (82.6 percent were satisfied or highly satisfied) than for controls (76.7 percent were satisfied or highly satisfied). Individuals who found their job through a school or training program or through the youth employment program were significantly more satisfied than those who found their jobs through employers, friends or ads.

The follow-up also included several questions to assess self-concept and locus of control. There were no significant differences between the two groups. Ninety percent of the participants and 88 percent of the controls gave positive responses to the self-concept questions. Seventy seven percent of the participants and seventy four percent of the controls gave positive responses to the locus of control questions.

Regression analysis. Background variables (age, race/ethnicity, sex, economic status, initial education level, reading ability, local youth unemployment rate, and participant/control status) were regressed on four employment outcomes (current employment status, number of months worked, job complexity, and salary), two education/training outcomes (current educational level, months of education/training), and on three attitudinal outcomes (job satisfaction, self concept, and locus of control) for all participants and controls. The results are shown in Table 9. As can be seen, the participants had significantly more months of work, more months of education, higher job satisfaction, and more internalized locus of control, after controlling for the other explanatory variables. Initial education level and reading ability had significant effects on most of the outcomes. Local youth unemployment rates significantly affected the work outcomes but did not have a significant impact on education/training outcomes. Age showed a significant negative relationship to current employment status, current education level, months of education/training, job satisfaction, self concept and locus of control. Being female was positively related to job complexity but negatively related to months of work and to hourly wage. Minority group membership was negatively related to a hourly wage and to current education level, but positively related to self concept.

Next, regressions were carried out for participants only to determine the differential effects of program characteristics as well as the other explanatory variables. These results are shown in Table 10. As can be seen, programs emphasizing work experience had a significant effect on

the number of months worked by participants and on hourly wage. Program duration was significantly related to number of additional months of education or training. Higher local youth unemployment rates led participants to jobs of lower complexity levels or to spending more time in education/training.

Females were more likely than males to be currently employed, but females had fewer months of work than males. About half of the females not currently employed reported that they left the labor force because of pregnancy or child care responsibilities. Female participants had significantly lower hourly wages than males.

Minority status shows a significant positive relationship to hourly wages. This is, of course, the opposite effect from that found for the total sample where there was a significant negative relationship between race/ethnicity and wages. This finding reinforces the earlier finding of greatest program effectiveness for Black participants

Commonality Analysis. The final step in the analysis was the partitioning of the effects of background, education, program participation, and environment (local youth unemployment rate) on job search behavior and on selected outcomes. The model tested for direct effects and, also, for indirect effects through job search behavior. These direct effects are summarized in Table 11. As can be seen, background (age, sex, race/ethnicity, and economic status) has a significant direct effect on all outcome variables. Education (educational level and reading ability at program entrance) significantly affects employment status, months of employment, job complexity and months of education/training. Environment (local youth unemployment rate) significantly affects all the work-related

outcomes but not months of education/training. Program participation has a significant effect only on the number of months of employment. Job search behavior did not have any significant direct effects and there were no significant indirect effects through job search behavior.

Current employment or unemployment status of these youths is most strongly influenced by background and education; however, local unemployment rate also has a significant effect. The number of months of employment obtained by these youths is most strongly influenced by education; local unemployment rate, background and youth employment program participation also show significant effects. The complexity level of the jobs held is determined primarily by education; however the effects of local unemployment rates and background are also significant. Hourly wage is influenced primarily by background although local unemployment rate also has a significant effect. The number of months of education/training was affected most strongly by background but previous education and reading ability also have a significant effect.

Discussion and Conclusions

These findings make it clear that youth employment programs have a positive and long-lasting impact on their participants. The major finding was that youth employment program participants were employed for significantly more months during the three-year follow-up period than were non-participant control subjects. The regression and commonality analyses show that this outcome is independent of background factors such as age, sex, race/ethnicity, previous education and reading ability, and local youth unemployment rate.

These findings also make it clear that youth employment programs cannot, in a relatively brief time, overcome the stronger, long-term effects of background, education, and environment. Background influenced all the outcomes significantly. The major background effects included: (1) older subjects obtaining fewer months of education/training and being less likely to be employed; (2) females being more likely to be employed than males but, also, working fewer months than males, primarily because of pregnancy and child care responsibilities, employed females had jobs of greater complexity than males but receiving lower wages; and (3) minority group membership being associated with lower wages for the total sample but with higher wages for youth employment program participants.

Initial education also had a significant effect on both work and on further education/training. Youths who had completed more years of schooling and had better reading ability at program entrance were more likely to be currently employed at the time of the three year follow-up, to have accumulated more months of employment, to hold jobs of higher complexity, and to have obtained more months of additional education or training than youths with less initial education and/or poor reading ability. This suggests that programs encouraging youths to remain in school and to acquire competency in reading should be assigned high priority since they would probably be even more effective in reducing youth unemployment than would employment training programs.

Youths in areas with low unemployment rates were more likely to be currently employed, to have accumulated more months of employment, and to hold jobs of greater complexity levels paying higher wages than youths

in areas of high unemployment. It is interesting to note that economic status did not relate significantly to the economic or the education/training outcomes. This suggests that it is the lack of job opportunities in the environment, not poverty itself, that leads to high levels of unemployment among poor youths.

Taken together, these findings suggest that the policy decision to invest in sponsorship of a youth employment program can be anticipated to have a direct payoff in reducing youth unemployment. It seems clear that, when number of months of employment is the outcome, youth employment programs are especially effective for Blacks and for females. In addition, youth employment programs are effective in producing higher hourly wages for participants from minority groups.

Finally, these findings show that different types of youth programs have different effects. This suggests that the design of these programs should differ according to the target group and the outcome desired. Programs for youths who have completed or dropped out of school appear to be better able to increase employment outcomes if they emphasize work experience activities. Programs that are targeted toward keeping youth in school or toward encouraging job training appear to be more successful if they emphasize career development. Although job search methods did not show a significant relationship to outcomes after controlling for background, training in job search skills appears to be important and probably preferable to job development.

These results also suggest that future studies of youth employment programs should not treat them as a single form of intervention but

should differentiate by program emphasis, duration, and population served. Failure to conduct a careful multivariate analysis can result in the aggregation of counterbalancing effects and lead to the erroneous conclusion that these programs lack efficacy.

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Table 1

Characteristics of Participants and Controls

	Participants	Controls
Age - Mean	17.31	17.05
Sex		
Male	44.8%	41.6%
Female	55.2%	58.4%
Race/Ethnicity		
Black	63.8%	64.6%
Hispanic	20.9%	19.7%
White	13.2%	14.9%
Other	2.2%	0.8%
Highest Grade Completed - Mean	10.74	10.69
Economic Status		
Below 70% of lower living standard income level	69.5%	57.9%
71% to 85% of lower living standard income level	19.4%	23.6%
Above 86% of lower living standard income level	11.1%	18.5%

Table 2

Distribution of Participants by Program Characteristics

	Career Development	Emphasis Work Experience	Other/ Mixed	Total
Duration				
Less than 250 hours	18.1%	22.4%	3.9%	44.4%
More than 250 hours	38.8%	12.9%	3.9%	55.6%
Total	56.95	35.3%	7.8%	100.0%

Table 3
Job Search Behaviors

Sources(s) Used	Participants	Controls
Friends or relatives	38.2%	36.8%
Applied directly to employer	31.7%	23.9%
School or training agency	12.9%	11.8%
Ads in newspaper, etc.	7.6%	5.6%
Employment agencies	7.2%	8.4%
Youth program staff	7.2%	6.5%
Church, union, and other	2.6%	5.1%

Table 4
Work History

	Participants	Controls
Currently working	49.4%	49.2%
Worked previously, not now	44.6%	39.3%
Never worked	6.0%	11.5%

Table 5
Reason(s) Why Youths Were Unable to Find Work

	Participants (N=207)	Controls (N=204)
No suitable jobs available	68.1%	64.2%
Lacked experience	34.3%	38.2%
Lacked skills, education	23.2%	25.0%
Transportation barriers	14.0%	10.8%
No references	7.2%	5.9%
Employer thought too young	5.8%	14.2%
Other	15.5%	18.1%

Table 6

Mean Months of Employment (Full-Time Equivalent)

	Participants	Controls	Participant Control Difference
Black	17.81	13.40	4.41
Hispanic	24.52	22.34	2.18
White	21.22	18.86	2.36
Female	18.69	14.74	3.95
Male	21.05	17.74	3.31
Total Group	19.74	15.99	3.75

Table 7

Education/Training History

	Participants	Controls
Currently in school/training	17.90%	17.13%
Previously in school/training	65.63%	67.70%
No school/training	16.47%	15.17%

Table 8

Mean Months of Education/Training

	Participants	Controls	Participant Control Difference
Black	18.95	19.28	-0.33
Hispanic	21.49	17.40	4.09
White	22.19	18.46	3.73
Female	19.10	18.58	0.52
Male	21.08	19.08	2.00
Total Group	19.98	18.79	1.19

Table 9

Regression Analysis for Participants and Controls

Explanatory Variables	Outcome Variables								
	Current Employment Status	# of Months Worked	Job Complexity	Hourly Wage	Current Ed Level	# of Months Ed/Training	Satisfaction With Work	Self Concept	Locus of Control
Age	-.15*	-.03	.00	.07	-.14*	-.42*	-.10*	-.17*	-.17*
Sex	.06	-.10*	.07*	-.19*	.05	-.04	.05	-.02	-.04
Race/Ethnicity	.01	.00	.02	-.12*	.08*	.02	.08	.10*	.05
Economic Status	.02	.01	.00	-.02	.02	.02	-.04	.07*	.03
Initial Ed Level	.13*	.20*	.11*	.15*	.58*	.09*	-.01	.13*	.05
Reading Ability	.07	.11*	.13*	.15*	.19*	.08*	.08*	-.04	.21*
Unemployment Rate	-.14*	-.16*	-.14*	-.18*	-.05	.02	.08	-.08	-.04
Participant/Control Status	.07	.09*	.03	.00	.03	.07*	.08*	.04	.07*
R^2	.22*	.30*	.25*	.34*	.59*	.37*	.17*	.18*	.26*

* = significant effect (slight differences in significance level are due to differences in the standard error of the regression weights)

Table 10

Regression Analysis for Participants Only

Explanatory Variables	Current Employment Status	# of Months Worked	Outcome Variables		
			Job Complexity	Hourly Wage	# of Months Ed/Training
Age	-.06	.13*	.07	.05	-.28*
Sex	.13*	-.11*	.01	-.14*	.01
Race/Ethnicity	-.02	.00	.12	.20*	.08
Economic Status	-.09	-.05	-.04	-.06	.03
Initial Ed Level	-.02	.17*	.04	.02	.02
Reading Ability	.12*	.08	.10	.10	.12*
Unemployment Rate	-.10	-.06	-.16*	-.13	-.15*
Program Emphasis-Work Exp.	-.09	.12*	.03	.20*	-.06
Program Duration	-.01	-.03	-.06	.05	.23*
R^2	.28*	.25*	.23*	.29*	.45*

Table 11

Summary of Commonality Analysis Showing Relative Size of Direct Effects

Independent Variables	Current Employment Status	# of Months Employment	Outcome Variables		
			Job Complexity	Hourly Wage	# of Months Ed/Training
Background	.035*	.014*	.007*	.024*	.147*
Education	.039*	.058*	.033*	.003	.031*
Environment (Unemployment Rate)	.015*	.020*	.012*	.006*	.000
Program Participation	.004	.011*	.002	.002	.003
Job Search Behavior	.001	.001	.000	.002	.001

* = Significant effect